

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
4 November 2004 (04.11.2004)

PCT

(10) International Publication Number  
**WO 2004/095650 A3**

(51) International Patent Classification<sup>7</sup>: **H01R 13/633**,  
G06K 13/08

**TOMITA, Mitsuhiro** [JP/JP]; 6-5-719 Nishi-tsuruma  
3-chome, Yamato-shi, Kanagawa 242-0005 (JP).

(21) International Application Number:  
PCT/US2004/008528

(74) Agent: **CALDWELL, Stacey, E.**; Molex Incorporated,  
2222 Wellington Court, Lisle, IL 60532 (US).

(22) International Filing Date: 19 March 2004 (19.03.2004)

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
118091/2003 23 April 2003 (23.04.2003) JP

(71) Applicant (*for all designated States except US*): **MOLEX INCORPORATED** [US/US]; 2222 Wellington Court, Lisle, IL 60532 (US).

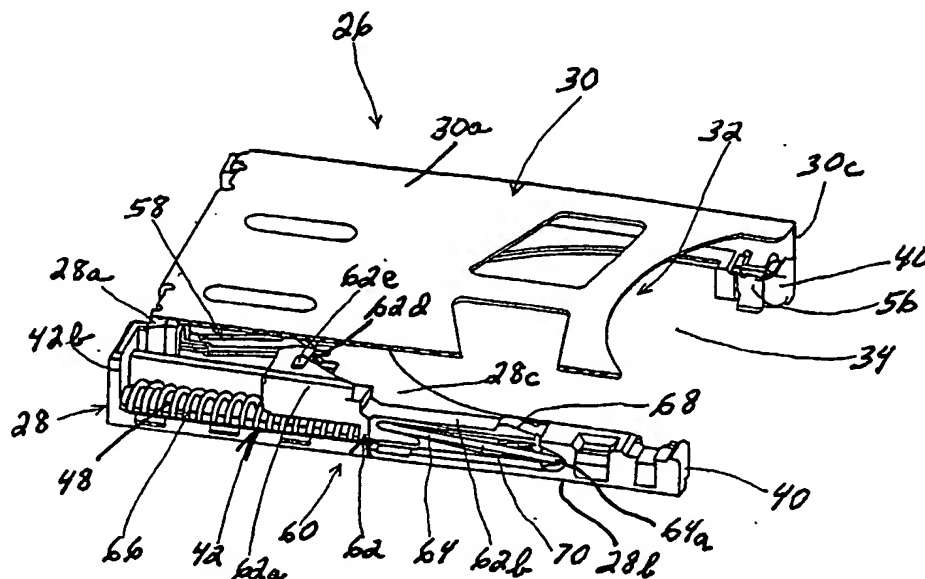
(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **MATSUKAWA, Jun** [JP/JP]; Court-pal Kobayashi 307, 12-15 Chuo-rinkan 3-chome, Yamato-shi, Kanagawa 242-0007 (JP).

[Continued on next page]

(54) Title: MEMORY CARD CONNECTOR WITH EJECTOR MECHANISM



(57) Abstract: A memory card connector includes an insulative housing having a rear terminal-mounting section which mounts a plurality of terminals having contact portions for engaging appropriate contacts on a memory card. A metal shell is mounted on the housing and combines therewith to define an interior card-receiving cavity formed by a top plate and opposite side plates of the connector. The cavity has a front insertion opening to permit insertion and withdrawal of the memory card into and out of the connector. The terminal-mounting section of the housing is located at the rear of the cavity. A card ejector mechanism is located at least partially beneath the cavity adjacent one side thereof, whereby the opposite side plates of the metal shell define the opposite sides of the cavity.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Date of publication of the amended claims: 14 April 2005

**Published:**

- with international search report
- with amended claims

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**(88) Date of publication of the international search report:**

3 March 2005

## AMENDED CLAIMS

[received by the International Bureau on 21 January 2005 (21.01.2005);  
original claims 1-16 replaced by amended claims 1-4 (1 page)]

1. A memory card connector (26), comprising:  
2 an insulative housing (28) having a rear terminal-mounting section (28a) which  
mounts a plurality of terminals (58) having contact portions (58e) for engaging appropriate  
4 contacts on a memory card (36);  
a metal shell (30) mounted on the housing and combining therewith to define an  
6 interior card-receiving cavity (32) formed by a top plate (30a) and opposite side plates (30b,30c)  
of the metal shell, the cavity having a front insertion opening (34) to permit insertion and  
8 withdrawal of the memory card into and out of the connector, with said terminal-mounting section  
of the housing being located at the rear of the cavity; and  
10 a card ejector mechanism (60) at least partially beneath the cavity adjacent one  
side thereof, whereby the opposite side plates (30b,30c) of the metal shell (30) define the opposite  
12 sides of the cavity (32) wherein said card ejector mechanism (60) includes a card-engaging slider  
(62) movable with the card and having a cam slot (70) in one of an outside face (62c) and a  
14 bottom face thereof, and one of the side plates (30b) of the metal shell (30) includes a spring  
member (84) for biasing a cam follower pin (64) into the cam slot.

2. The memory card connector of claim 1 wherein said metal shell (30) is  
2 stamped and formed of sheet metal material, and said spring member comprises a spring arm (84)  
stamped out of the one side plate (30b) of the metal shell (30).

3. The memory card connector of claim 1 wherein said cam slot (70) is formed  
2 in the bottom face of the card-engaging slider, and the one of the side plates (30b) of the metal  
shell (30) has a bottom inwardly turned flange (98) on which the spring member (100) is formed.

4. The memory card connector of claim 3 wherein said metal shell (30) is  
2 stamped and formed of sheet metal material, and said spring member comprises a spring arm  
(100) stamped from said inwardly turned flange (98) out of the one side plate (30b) of the metal  
4 shell (30).

AMENDED SHEET (ARTICLE 19)